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62-4-6

PROGRESS REPORT

Project 6X60-01-001, Internal Medicine

Task 3, Detection of Asymptomatic Coronary Disease

Walter Reed General Hospital
Washington 12, D. C.

Department of Medicine
Cardiology Service

1 July, 1961 through 30 June, 1962

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T. W. Mattingly, Brig. Gen., MC (Ret.)*

Reports Control Symbol MEDDH-288

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Task 3, Detection of Asymptomatic Coronary Disease
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1 July, 1961 - 30 June, 1962
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ABSTRACT

A total of 300 officers on duty at Walter Reed Army Medical Center and the Pentagon, having entirely normal cardiovascular findings, including normal electrocardiograms, roentgenograms of heart, blood pressure, and routine cardiovascular examinations, were subjected to diagnostic studies in an effort to determine the presence of any abnormality in these tests that might uncover evidence of sub-clinical coronary artery disease. Studies consisted of electrocardiograms after a double two-step exercise test, ECG performed before and after a double two-step exercise test, determinations of lipoproteins and cholesterol values of the fasting blood sera. One hundred male officers were in the age group 25-34, one hundred in the age group 35-44, and one hundred males 45 and over. It is believed a long-term follow-up (25 years) may determine which or if any of the above tests are reliable in the early detection of coronary disease. The lipid studies were also performed on a group of patients in corresponding age groups with diagnosis of myocardial infarctions, angina, hypertensive cardiovascular disease, and arteriosclerosis obliterans. A control group of hospitalized patients with no evidence of cardiovascular disease was also studied as a control. A follow-up study and repeat lipid studies on the normal officers are in progress.

REPORT

The initial evaluation of the lipid studies in the normal officer groups and the patient groups has been completed and presented in a paper, Lipid Studies in Health and Disease, which was selected for presentation at the Scientific Assembly, American Medical Association, in San Francisco, California, June 1958, and was published in the Journal of the American Medical Association, May 1959. Great interest has been shown already in this study by various medical groups and physicians, and hundreds of reprints of this paper have been sent out in reply to requests since publication, and requests are still coming in from all over the world.

The American College of Physicians Postgraduate Course No. 4 held at the University of Pennsylvania School of Medicine with the Department of Public Health and Preventive Medicine from 9-13 May 1960, gave a Session to Dr. Mattingly's presentation of a paper, A Critical Evaluation of the Possibilities and Techniques for Determining the Health of the Cardiovascular System and for the Early Recognition of Deviations from Normal.

Lipids and the Steroid Hormones in Clinical Medicine was presented at a Symposium and Seminar under the auspices of the Association of Clinical Scientists, 9-10 October, 1959, in Washington, D. C. This paper has been published in the full proceedings of the Seminar, and the material used in this presentation was based to a large degree on the work performed at the Walter Reed Army Institute of Research and the Cardiology Clinic of Walter Reed General Hospital.

SUMMARY

This study was initiated in an effort to determine if asymptomatic coronary disease could be detected in 300 officers having completely normal findings at the time of their annual physical examinations in 1951. Studies were based on the two-step exercise test, Sf 12-20 and Sf 20-100 ultracentrifuge, and the cholesterol studies, and while certain abnormalities were found in some tests, no values consistently abnormal were noted in all studies.

PUBLICATIONS

1. Jenks, W.P., Hyatt, M.R., Jetton, M. R., Mattingly, T. W., and Durrum, E. L.: A Study of Serum Lipoproteins in Normal and Atherosclerotic Patients by Paper Electrophoretic Techniques. J. Clin. Invest. 9:980, 1956 (September)
2. Mattingly, T. W., Parmley, L. F., Jr., Durrum, E. L., Smith, E.R.B., and Hyatt, M.R.: Lipid Studies in Health and Disease, JAMA 170, 536, 1959 (May)
3. Mattingly, T. W.: Clinical Significance of Lipids in Cardiovascular Disease, Chapter in book entitled Lipids and Stereoid Hormones, Chapter 11, J. P. Lippincott, 1960. (The data of the study was used by Dr. Mattingly in writing this chapter, by invitation of the publisher)